

WHAT IS CLAIMED IS:

1. A method of crimping a varied diameter graft comprising:
 - (a) providing a flat-woven tubular graft having an enlarged woven bulbous portion disposed between flat-woven tubular ends, wherein the flat-woven diameter of said bulbous section is greater than the flat woven diameters of said tubular ends;
 - (b) providing a mandrel shaped and sized to said woven bulbous section and having a curved crimping surface; and
 - (c) positioning said curved crimping surface within said bulbous woven section so that the bulbous woven section contours to said curved crimping surface.
2. The method of claim 1, further comprising heating said bulbous woven portion to set the shape of said bulbous woven portion.
3. The method of claim 1, further comprising applying heat and pressure to said bulbous woven portion to set the shape of said bulbous woven portion.
4. The method of claim 2, wherein said heating is caused by ultrasonic action.
5. The method of claim 2, wherein said heating is caused by steam.
6. The method of claim 2, further including the steps of
providing a horn having a crimped surface mateable to said crimped surface of said mandrel;
aligning said crimping surfaces of said horn over said bulbous woven section;
securing said woven section between said crimping surfaces of said horn and said mandrel; and
causing said woven portion to heat by ultrasonic action to heat set crimps thereat.
7. The method of claim 1, further comprising rotating said graft around said mandrel

and repeating steps (d) and (e) until the graft is circumferentially crimped.

8. The method of claim 2, further including the steps of
providing a rotateable horn having a crimped surface mateable to said crimped surface of said rotateable mandrel made to rotate;
aligning said crimping surfaces of said rotateable horn over said bulbous woven section;
securing said woven section between said crimping surfaces of said rotateable horn and said rotateable mandrel; and
causing said woven portion to heat by ultrasonic action to heat set crimps thereat.

9. A method of crimping a varied diameter graft comprising:
providing a flat-woven tubular graft having an enlarged woven bulbous portion disposed between flat-woven tubular ends, wherein the flat-woven diameter of said bulbous section is greater than the flat woven diameters of said tubular ends;
providing a tubular cylindrical mandrel having a diameter such that its exterior surface is slidable engageable within said woven tubular ends;
providing a bulbously shaped mandrel donut, said donut being slidable over said cylindrical mandrel, said donut having a crimped exterior surface;
aligning said donut within said bulbous woven section of said graft;
sliding said cylindrical mandrel through said donut;
crimping said graft over said cylindrical mandrel and bulbous donut; and
removing said cylindrical mandrel and said bulbous donut from said graft.

10. The method of claim 9, wherein said removing step further comprises:
slidingly removing said cylindrical mandrel from said graft and said bulbous donut; and
removing said donut from said graft.

11. The method of claim 9, wherein said tubular mandrel comprises a crimping surface and wherein said flat-woven tubular ends are crimped over said crimping surface of said mandrel.

12. The method of claim 9, wherein the removing step further comprises compressing said donut.

13. The method of claim 9, wherein the removing step further comprises collapsing said donut.

14. The method of claim 9; wherein the removing step further comprises disassembling said donut.

15. A system for crimping a varied diameter graft comprising:
a mandrel having a bulbous portion, said bulbous portion having a curved crimping surface; and
a horn having a curved crimped surface aligningly engageable to said curved crimping surface of said mandrel; and
a source of ultrasonic energy.

16. A mandrel for crimping a varied diameter graft comprising:
a mandrel with a bulbous portion, said bulbous portion having an curved crimping surface.

17. A mandrel for crimping a varied diameter graft comprising:
a tubular mandrel having a diameter such that its exterior surface is slidably engageable within a vascular tubular graft, wherein said exterior mandrel surface has a crimping surface; and
a bulbously shaped mandrel donut, wherein said donut is slidable engageable over said tubular mandrel, said donut having a curved exterior crimping surface.

18. The mandrel of claim 17, wherein said donut is collapsible.

19. The mandrel of claim 17, wherein said donut is expandable.

20. The mandrel of claim 17, wherein said donut is inflatable.
21. The mandrel of claim 17, wherein said donut is made from a resilient material.
22. The mandrel of claim 17, wherein said donut is made from multiple parts and is disassembleable.